

REMARKS

Claims 1-6 and 8-21 remain in the application. Claims 7 and 11-35 have been canceled. New claims 28-30 have been added that incorporate all of the limitations of allowable claims 16, 20 and 21 respectively. Independent claim 1 has been amended to include the limitations of the substrate comprising a sacrificial light absorbing layer disposed on a dielectric layer. Support for this amendment can be found on page 6 of the present application, for example. Claims 3,5,6,8,11 and 12 have been amended for clarity. No new subject matter has been added with these amendments.

A. 35 U.S.C. § 102(b)

A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. *Verdegaal Brothers v. Union Oil Co. of California*, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). The identical invention must be shown in as complete detail as is contained in the claim. *Richardson v. Suzuki Motor Co.*, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989).

Huang- Claims 1-5, 7,11

Claims 1-5, 7, 11 stand rejected under 35 U.S.C. § 102(e) as being anticipated by Huang, et al. (hereinafter “Huang”) (Office Action, page 2). The Office relies on Huang for a teaching of a method of etching a substrate in a C₄F₆ gas utilizing a deep UV resist (Office Action, page 2). However, Huang does not disclose the limitations of etching the sacrificial light absorbing layer with a gas comprising a carbon to fluorine ratio of about 1:1 to about 2:3, as noted in the Office Action on page 5, section 8. Therefore, since Huang does not teach or suggest all of the limitations of amended claim 1, from which claims 2-5 and 7,11, depend, it is respectfully

submitted that claims 1-5 and 7,11 are not anticipated by Huang. Thus, reconsideration and withdrawal of the Section 102(b) rejection of claims 1-5, 7,11 is respectfully requested.

B. 35 U.S.C. § 103(a)

M.P.E.P. 706.02(j) sets forth the standard for a Section 103(a) rejection:

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

Huang in view of Fujimoto-Claim 6

Claim 6 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Huang in view of Fujimoto (Office Action, page 4). The Office contends it would have been obvious to modify Huang to use the nitrogen gas in Fujimoto, in the course of routine experimentation. (to which the Applicants do not concede). However, "To establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art." *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974). Amended claim 1 discloses the limitations of etching the sacrificial light absorbing layer with a gas comprising a carbon to fluorine ratio of about 1:1 to about 2:3. Because neither Huang nor Fujimoto teach or even suggest the limitations of amended claim 1 from which claim 6 depends, claim 6 is not rendered obvious by Huang in view of Fujimoto. Thus, reconsideration and withdrawal of the Section 103(a) rejection of claim 6 is respectfully requested.

Huang in view of Desphande-Claim 8,9,17-19

Claims 8,9,17-19 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Huang in view of Desphande (Office Action, page 5). The Office contends it would have been obvious to include the ARC etchant C_4F_6 of Desphande in the process of Huang for etching the light absorbing layer.

“The mere fact that the references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the resultant combination” In *re Mills*, 916 F.2d 680,16 USPQ2d 1430 (Fed Cir 1990)(See also MPEP § 2143.01). While Huang teaches utilizing a gas comprising a carbon to fluorine ratio of about 1:1 to about 2:3 to etch the ARC, as in amended claim 1 and claim 17 of the present invention, in order to utilize sidewall polymer formation to advantage, Desphande does not disclose or suggest such a ratio for polymer formation. Therefore, one skilled in the art would not be motivated to combine Desphande with Huang to solve this type of problem.

Thus, the mere fact that these references can be combined does not render their combination obvious. Because there is no suggestion or motivation to combine or modify Huang or Fujimoto, claims 8,9, and 18-19 , which depend respectively from amended claim 1 and 17, are not rendered obvious by Huang in view of Desphande. Thus, reconsideration and withdrawal of the Section 103(a) rejection of claims 8,9,17-19 is respectfully requested.

Huang in view of Desphande in view of Fujimoto-Claim 10

Claim 10 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Huang in view of Desphande in view of Fujimoto (Office Action, page 6). The Office contends it would

have been obvious to modify Huang and Desphande to use the nitrogen gas of Fujimoto because it would enhance selectivity (to which the Applicants do not concede).

However, claim 10 depends on non-obvious claim 1, as described above. Thus, reconsideration and withdrawal of the Section 103(a) rejection of claim 10 is respectfully requested.

Huang in view of Pfeiffer-Claim 12

Claim 12 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Huang in view of Pfeiffer (Office Action, page 7). The Office contends it would have been obvious to modify Huang to use the acrylic polymer of Pfeiffer (to which the Applicants do not concede).

However, However, claim 12 depends on non-obvious claim 1, as described above. Thus, reconsideration and withdrawal of the Section 103(a) rejection of claim 12 is respectfully requested.

Huang in view of Desphande in view of Lee -Claim 13-15

Claims 13-15 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Huang in view of Desphande and Lee (Office Action, page 7). The Office contends it would have been obvious to optimize selectivity by routing experimentation (to which the Applicants do not concede).

However, independent claim 13, from which claims 14-15 depend, contains the limitations of a carbon to fluorine ratio of about 1:1 to about 2:3 to etch the ARC. Since there is no suggestion or motivation to combine, as previously described, Huang with Desphande, nor is there suggestion or motivation to combine Lee, either alone or in combination with Huang and Desphande, claims 13-15 are not rendered obvious by Huang in view of Desphande and Lee.

Thus, reconsideration and withdrawal of the Section 103(a) rejection of claims 13-15 is respectfully requested.

In view of the foregoing remarks, the Applicants request allowance of the application. Please forward further communications to the address of record. If the Examiner needs to contact the below-signed Attorney to further the prosecution of the application, the contact number is (503) 264-0944.

Respectfully submitted,

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